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## Chasing Squares [pamphlet]

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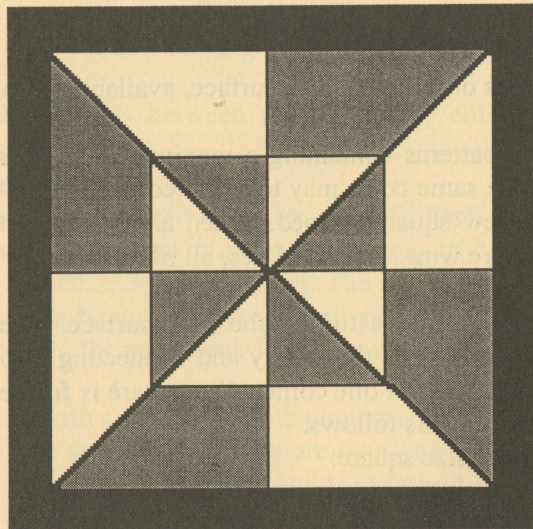
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# Chasing Squares™ *by Kadon*

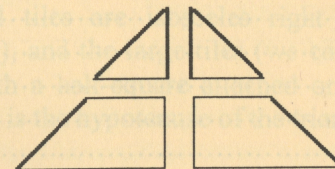
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Made in USA

Ages 8 to adult  
1 or 2 players

*How many can you catch?*

## Chasing Squares™



**Small and large  
Tricky lattices  
Maximums  
Patterns  
Games**



*A product of  
Kadon Enterprises, Inc.*



**Chasing Squares™** is a trademark of Kadon Enterprises, Inc., for its puzzle set of 8 isosceles right triangles (half-squares) and 8 trapezoids formed of a square and a half-square joined. Invented by Jeremiah Farrell and developed further by Kate Jones. Made by Kadon under exclusive license.

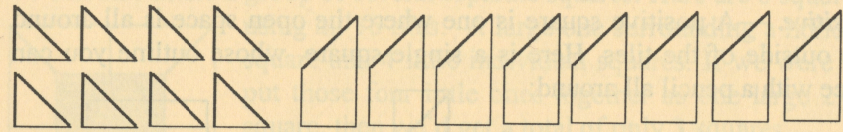
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*Chasing Squares* is crafted in lasercut acrylic by  
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**The Chasing Squares Set**

Jerry Farrell presented this puzzle originally at the International Puzzle Party in Prague, Czechoslovakia, in 2008, under the title, “The Prague Six.” The original challenge was to form 1, 2, 3, 4, 5 and 6 squares with these 16 pieces:



The small tiles are isosceles right triangles (a square cut in half diagonally), and the large tiles (we call them “sheds”) are the area of a square with a half-square attached on one side. The diagonal edge of each piece is the hypotenuse of the triangles.

In most of the challenges, you will join tiles by matching lengths of edges: hypotenuse to hypotenuse, and short side to short side. You can turn tiles around and over as needed and mix the two colors as you like.

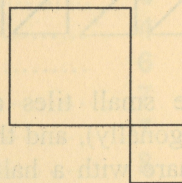
We present here a large variety of goals, forming pretty patterns, symmetries and imaginative figures. The main theme, however, is to make squares, from 1 to 24 (or more, if you can find them!), using all 16 pieces. Some squares will be tricky to see as they’ll overlap.



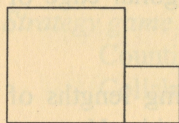
## Forming Squares

In Chasing Squares, we use a special definition of what makes a square. All four sides of every square must be “traceable”—its sides must be exposed either on the inside or on the outside, or a combination.

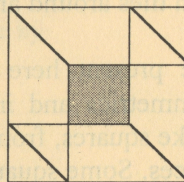
**Positive.** —A positive square is one where the open space is all around the outside of the tiles. Here is a single square, whose outline you can trace with a pencil all around:



At right are two squares, since you can trace around the outsides of both the large and the small square:

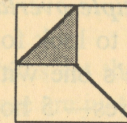


These at left do not count as squares because they cannot be freely traced all around. Your pencil can't get through the edge where they are joined.

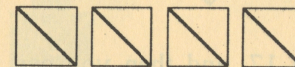
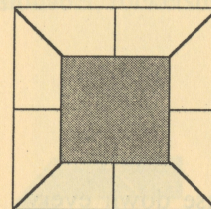


**Negative.** — A negative square is formed as a space (shaded area) between other squares or tiles, and you trace its outlines around the inside of its space. This figure has 2 squares: the positive outer perimeter and the negative interior space.

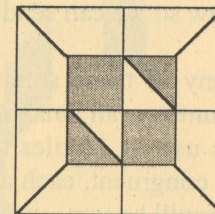
**Mixed.** — A square can be partially positive and partially negative, as in this sample. The small square's edges are half on the outside and half on the inside, all traceable. This combination has 2 squares: the little one overlapping the larger one on a quarter of its area.



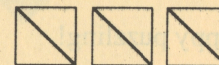
We can also make a group of several separate squares. Here are 6 squares using all 16 tiles: A large one surrounding a hollow square and 4 little individual squares. If we were to put those four little ones together as one large 2x2 square, then we'd get a total of only 3 squares.



If we put two small triangles into the empty center square, they will divide the center into four small squares (at right). Add the negative center square plus the big outer square and the remaining 3 small ones and get a new total of 9 traceable squares!

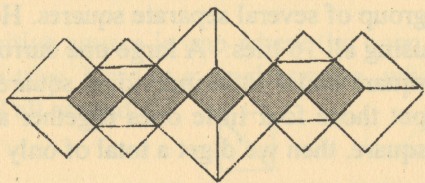


You may see that there are four other squares in this figure—the four quarters of the big square. But we can't count those, because a pencil cannot go through the joined edges.



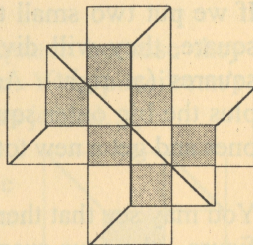


**Multiple overlaps.** — To form many squares with just 16 pieces, we'll need to look for and build many negative, mixed, and overlapping areas. Here's one with 14 squares. Let's see where they are: there are 9 unit squares— 5 hollow and 4 solid; then we have 4 overlapped double-size squares, and one size-3 square in the center. The two pairs of overlapped squares each share one little square between them. Got it?



Here's one more example, a 17, and then you can chase down every number of squares from 1 through 24. If you find more than 24, let us know so we can send you a prize!

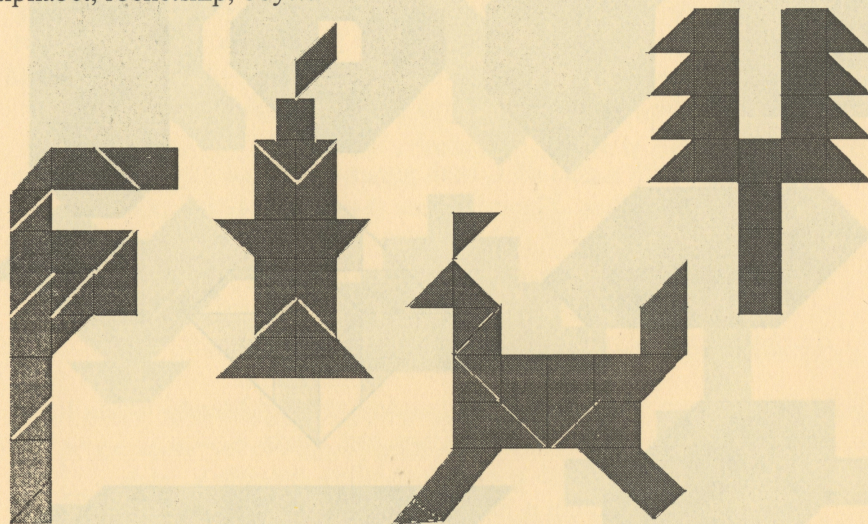
Many of these solutions will display a beautiful symmetry, an amazing artistry of form. See if you can use all 16 tiles to make just two squares that are congruent, each a different color. If you find it, you will be very surprised and pleased.



Happy puzzling!

## Fancy Figures

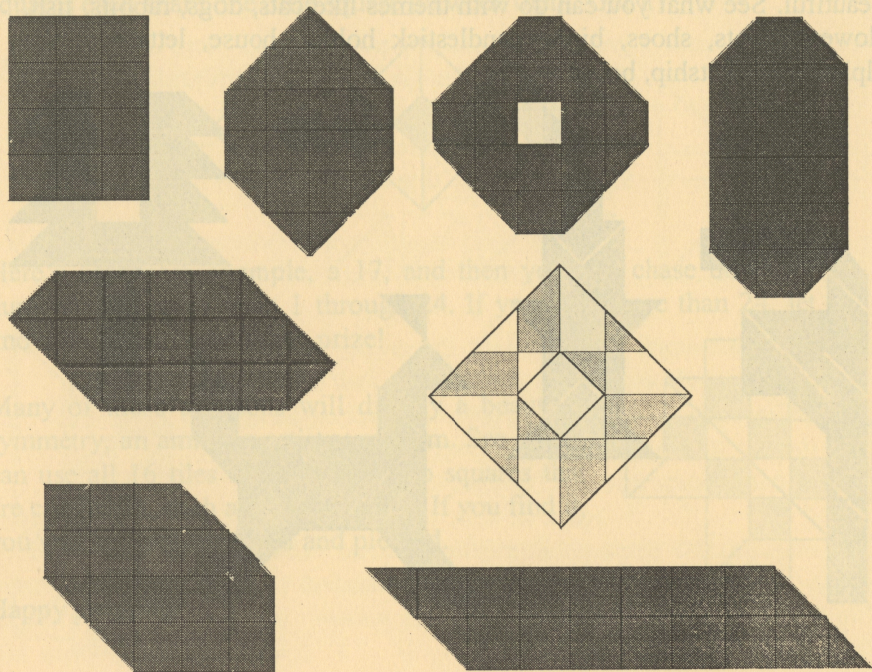
The Chasing Squares set is also something of a super tangrams set that lets you create picturesque images and fanciful characters. Here are just a few to get your imagination started. Symmetrical shapes are especially beautiful. See what you can do with themes like cats, dogs, rabbits, fish, flowers, boats, shoes, birds, candlestick holder, house, letters of the alphabet, rocketship, boy...



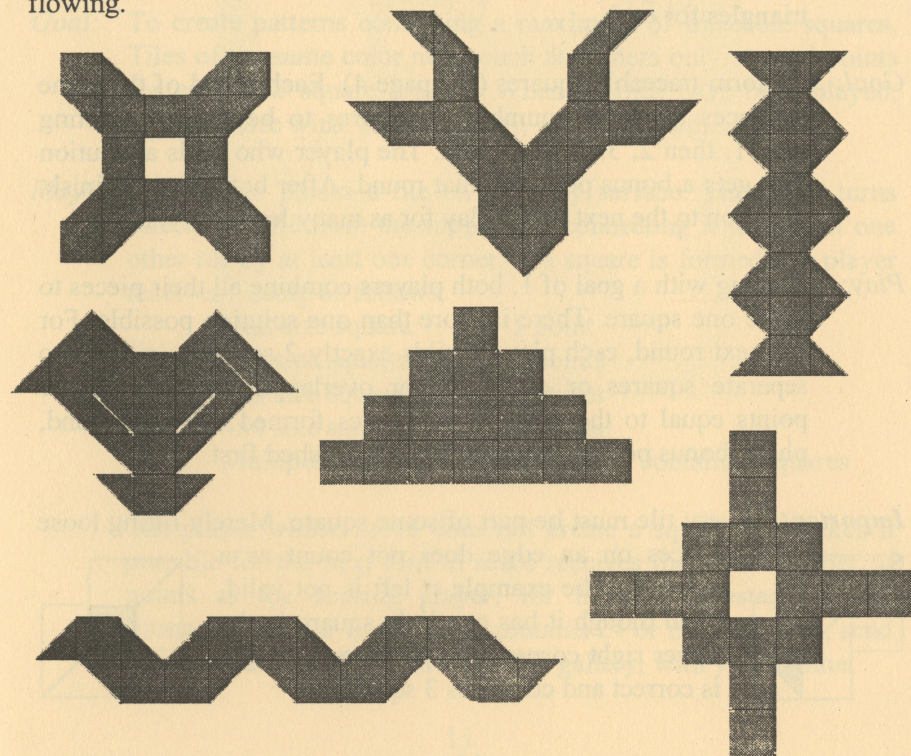


## Convex, Concave

How many different convex shapes can you make with some or all of the 16 Chasing Squares tiles? A convex shape is a polygon with no indented angles. Here are a few to get you started. Use colors creatively.



Concave shapes can have any number of indented angles, like a star. They can look like kaleidoscopic sunbursts or mandalas when you build them with symmetry. Here are a few examples to get your creativity flowing.





## Counting Up

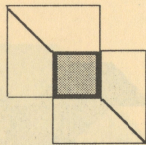
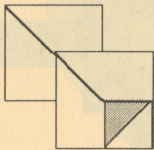
### Pattern-making game for 2 players

**Start:** Divide the tiles between the players by color: 4 sheds and 4 triangles for each.

**Goal:** To form traceable squares (see page 4). Each round of the game advances the target number of squares to be formed, starting with 1, then 2, 3, 4, and so on. The player who finds a solution first gets a bonus point for that round. After both players finish, move on to the next level. Play for as many levels as you can.

**Play:** Starting with a goal of 1, both players combine all their pieces to make one square. There is more than one solution possible. For the next round, each player builds exactly 2 squares—either two separate squares or embedded or overlapping squares. Score points equal to the number of squares formed for each round, plus 1 bonus point for the player who finished first.

**Important:** Every tile must be part of some square. Merely fitting loose pieces on an edge does not count as a solution. The example at left is not valid, even though it has one little square in the lower right corner. The figure to the right is correct and counts as 3 squares.



## Collaboration

### Design-making game for 2 players

**Start:** The 16 tiles outside the play surface, available to both players.

**Goal:** To create patterns containing a maximum of traceable squares. Tiles of the same color may touch at corners only. Award points for each new square formed. When all tiles have been played, highest score wins. In case of ties, all players win.

**Play:** First player places a tile on the play surface. Then take turns selecting a tile from the supply and connecting it to at least one other tile by at least one corner. If a square is formed, the player receives a score as follows:

Unit size square:	1 point
2x2 size square:	2 points
3x3 size square:	3 points
4x4 size square:	4 points
Multiple squares:	Sum of all contained squares

The player whose move does not create a square but makes it possible for the next turn to score receives the same number of points as the scoring player, for having “invested” in the formation. If your final design contains 24 or more squares, send us a picture of it! We’ll add it to our gallery, with your byline.